```
   1   CTGCAGTCCG   GAGATGAAAG   CACCACTGTG   TGTACCCCAT   CAGCGTGGTC
  51   CCGCAGGCCA   TGATTTTTGT   CACAGACTCA   ATGACTACCG   GACGCACTGA
 101   ACCTTCCGGT   TGTTTCTCCA   GCCAGTTAAG   CCAGCGGTTT   CCCTGCTGAA
 151   AAATGTCGGC   AAAACGGGGA   AGCATCAGAA   GGGCGGGGGA   ACTCCGTCCG
 201   GCCAGTGAAC   CGTGCCACAC   TCCGGGCAGT   ACATGCCGCC   GGCGCTGATA
 251   CCGGCAAGAA   TGGTCGCAAA   CTCCCGCTCC   GTGCAGCGGG   CTATTTCAGG
 301   ATACCCTTCG   TCATCAACAC   GTACAAACCA   GAAGACCAGC   TTTTTGTTTC
 351   TGACATCCAC   AAAGAAGGGA   ATATTCAGGT   CTGCGCAGCA   CTCAACGGCA
IS91 ←──────────────────→ katP
 401   TCGTCAGTTG   CGGCTTGGAA   CCCCTTAGTA   TTTTTTGTCT   GTAGTATCTA
 451   TCCCAGCAAT   AGGTATATCC   TGTTGCATCA   ATAAAGTTGA   CTTTTGTATA
 501   CAACATGCGA   ATTTCCCTTA   ATCCGGAGCT   ATTCGTATGA   TAAAAAAAAC
 551   TCTTCCTGTT   CTGATTCTTC   TGGCGCTATC   GGGGAGCTTT   TCTACCGCTG
 601   TAGCCGCTGA   TAAAAAAGAG   ACTCAAAATT   TCTACTATCC   AGAAACACTG
 651   GATTTAACTC   CTCTGAGATT   ACACAGCCCT   GAATCAAATC   CCTGGGGGGC
 701   TGATTTTGAT   TATGCCACCA   GATTTCAACA   GCTGGATATG   GAGGCTCTGA
 751   AAAAAGATAT   CAAAGATTTG   CTGACAACTT   CCCAGGATTG   GTGCCCTGCG
 801   GATTATGGTC   ATTATGGTCC   TTTCTTTATT   CGTATGGCTT   GGCACGGTGC
 851   CGGAACATAC   AGGACATATG   ATGGCCGGGG   AGGCGCCAGT   GGTGGTCAGC
 901   AACGTTTTGA   ACCGCTGAAC   AGCTGGCCGG   ATAACGTTAA   TCTGGATAAA
 951   GCCCGTCGAT   TGCTGTGGCC   AGTCAAGAAA   AAATACGGCT   CCAGTATTTC
1001   CTGGGGAGAC   CTGATGGTCC   TGACTGGTAA   TGTTGCCCTT   GAATCCATGG
1051   GATTTAAAAC   GCTGGGATTT   GCTGGCGGAA   GAGAAGATGA   CTGGGAGTCG
1101   GACCTGGTAT   ACTGGGGGCC   TGACAACAAG   CCTCTTGCAG   ATAACCGGGA
1151   TAAAAACGGG   AAACTTCAGA   AACCTCTTGC   CGCCACGCAG   ATGGGACTTA
1201   TTTATGTCAA   TCCTGAAGGC   CCCGGTGGAA   AACCAGATCC   TCTGGCTTCC
1251   GCGAAAGATA   TCAGGGAAGC   TTTTTCACGT   ATGGCCATGG   ATGATGAGGA
1301   GACTGTGGCC   CTGATCGCGG   GAGGGCATAC   ATTTGGTAAA   GCACATGGTG
1351   CAGCGTCTCC   TGAAAAATGT   ATTGGCGCAG   GGCCTGATGG   TGCACCTGTG
1401   GAGGAGCAGG   GACTGGGATG   GAAAAATAAA   TGTGGTACAG   GAAACGGCAA
1451   ATATACCATC   ACCAGTGGCC   TGGAAGGAGC   CTGGTCGAC
```

FIG. 1

```
   1  CTGCAGGAGA   TGGAAAAAAA   GCCAAAATAA   AAAATTGCCC   ATCCCAGCGC
  51  GCTCCAGCTG   AAAGTAGGCC   TGTTCTGTCC   GGTATTTAAA   TGCATTGACC
 101  GTCCCCGTAT   TTAAACAATG   TGATAAATTA   CTCCGTTACC   GGAAAACCGC
 151  TGAACAAAAT   TCGGGCTGAA   AAGAGGATCC   GCCGTTATCT   GTTGCATTTC
 201  CCCTTAGCCT   GACTAGCCAG   AGACACAATG   ATCTGTGCCG   TTCTGTTAAT
 251  ATCAAACCGG   TACTCAATAT   CTTCTCTGGC   GCTGGCTGCC   ATCATCCGGA
 301  AGCGTTCCGG   TCGGGATAAA   AAATCGCGCA   GTGCGCCGGT   CCATGCAGAC
 351  ACATCCCCCA   CGGGTAACAG   CGTCCCTGTC   ACATTCTTCT   GAATGACATC
 401  AGGGATCCCG   CCCGTCTCAC   TGGCGATAAC   GGGCACGCCG   GAGACTGACG
 451  CTTCAGCCAG   TACCATACCA   AACGCTTCAT   TTTCCGAAGG   CATGACCACC
 501  ACACTGGCAA   TCCGGTAGAC   CGGTAACGCT   GGGAAAAGGG   CACCTGCCAT
 551  TAACACATCT   CCGCTCATTC   CCAGGTGTTC   TGTCTGCTGA   CGCAGACGTG
 601  CTTCGTATTC   TTCACGCCCG   GCGCCCACCA   CGAGCCAGCG   AAATGATTTC
 651  CCTTCCATCT   TCAGCTGATA   CAATACACGC   AGCATAAATT   CATGTCCTTT
 701  TTCGGGACGT   AGCATCCCCA   CCTGAACGAT   AAGCGGAACA   TTGTCTGCTG
 751  ATGCAGCCCA   GGCGTGGATA   TGCAGGGGTA   ACGGTCGCAT   GGCTTCATTA
 801  TGCAATGCGG   GCCAGTCGAA   ACCCGGTGGA   ATAACCGTTA   CCGGTGTCCT
 851  GACACCTTCC   GCCATCAGAT   GCGCCATCAT   GGGTGAGATA   GGCACAACAA
 901  TGAAATCACA   CAGATAATTC   AGGGAAAACG   TTCTGGTCTT   ACGGGTGATG
 951  TAGGTTTTTT   GTCTGACAAT   AGTGAAGCGG   TGACAGCATA   TCAGACGGCT
1001  CAGTCCTGCT   ATATTACTGT   CATGGCCACT   ATGGCAGATG   ACCAGATCAG
1051  GTTTAAATTC   CCCGATAATC   CGTCGAAGTC   TGAGGATGGA   AGGAAGGTGA
1101  AGGCTGTTCC   TGAAAGGAAT   AAAAGTGACA   TCATGCCCTC   TTTTTCTGGC
1151  TTCCGGAGCA   ATTTTACTTT   TTTCTCTGCA   G
```

FIG. 2